

Appl. No. : 10/815,905
Filed : March 31, 2004

REMARKS

In response to the Office Action, Applicants respectfully request the Examiner to reconsider the pending rejections in view of the following comments.

Claim Rejections under 35 U.S.C. § 102

Claims 20, 21, 23 and 26-28 have been rejected as being anticipated by Pei et al. (U.S. 2004/0263028). Applicants respectfully traverse these rejections. Applicants submit that Pei fails to teach or suggest the recited combinations of claim limitations, including an interferometric modulation pixel comprising two supports between the first electrode and the second electrode to form a cavity between the first and the second electrodes and a hydrophobic layer on a cavity-side surface of the first electrode.

Claims 20, 21, 23 and 26-28

Pei does not disclose a hydrophobic layer on a cavity-side surface of an electrode. The Examiner contends that the top and bottom pre-strained polymers 291 and 292 of Pei et al. are supports between the first and second electrode to form a cavity between the first and second electrodes. *See* Office Action at 2. The Examiner also refers to paragraphs 0172 and 0173 of Pei et al. with respect to the hydrophobic layer. However, Pei et al. does not disclose a hydrophobic layer on a cavity-side surface of an electrode. Paragraph 0172 merely indicates that the polymers (which the Examiner identifies as the supports) may be hydrophobic. Because Pei does not disclose a hydrophobic layer on a cavity-side surface of a first electrode, it does not anticipate Claim 20 or corresponding dependent claims.

Pei also fails to disclose two supports between the first electrode and the second electrode to form a cavity between the first and the second electrodes. The Examiner contends that Figure 2 of Pei shows a cavity between the two electrodes 293 and 294. However, Pei Figure 2M (reproduced below for the convenience of the Examiner) shows that, instead of a cavity, structures 291, 292 and 295 are between the electrodes 293 and 294.

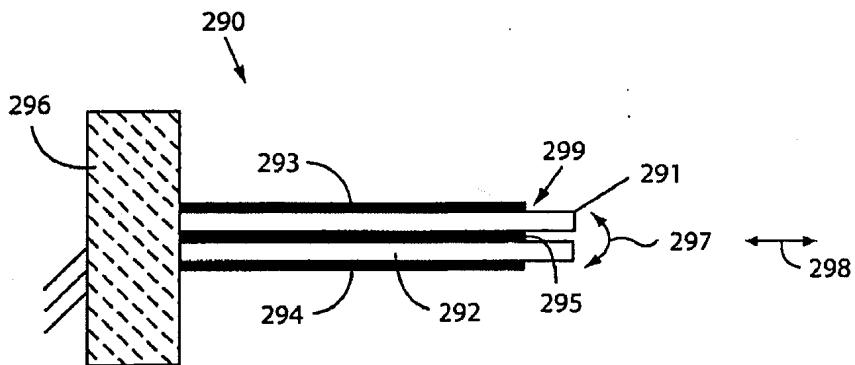


FIG. 2M

The Examiner notes that a cavity exists between the two **supports** 291 and 295 (see Office Action at 4), but Claim 20 recites a cavity between the first and second **electrodes**. Because Pei does not disclose all of the limitations arranged as recited in Claim 20, it does not anticipate Claim 20, nor the dependent Claims 21, 23 and 26-28. Therefore, Applicants respectfully request reconsideration and withdrawal of these rejections.

Claim 21

The Examiner cites paragraph 0195 of Pei, contending that it discloses a hydrophobic layer comprising a hydrophobic organic compound having at least a hydrogen atom being capable of forming hydrogen bonds with oxygen or nitrogen. Applicants disagree, and note that the Examiner fails to point to the disclosure of such a compound in paragraph 0195. In the event that the Examiner maintains this rejection, Applicants respectfully request that the Examiner specifically identify the portion of Pei that discloses a hydrophobic organic compound having at least a hydrogen atom being capable of forming hydrogen bonds with oxygen or nitrogen.

Claim 23

The Examiner cites paragraph 0064 of Pei, contending that it discloses a first electrode comprising an insulating layer. Applicants disagree. Pei refers to the electroactive polymer and the electrodes as different structures, stating that "an electroactive polymer refers to a polymer that acts as an insulating dielectric between two electrodes." Pei at paragraph 0064; *see also* Pei at paragraph 0067. The Examiner appears to recognize this distinction, referring to electroactive

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polymers 291 and 292 as corresponding to the supports, not the electrodes, of Claim 20. Thus, even if polymers 291 and 292 comprise an insulating layer (which Applicants do not admit), Pei fails to disclose a first electrode comprising an insulating layer. Because Pei fails to teach all the limitations of Claim 23, Claims 23-25 are not anticipated.

Claim 26

The Examiner cites paragraph 0187 of Pei, contending that it discloses a first electrode comprising a transparent conductive layer, a light-absorption layer and an insulating layer. Applicants disagree. Pei paragraph 0187 merely indicates that a reflective surface may be bonded to a bending beam actuator. Pei does not disclose a first electrode comprising a transparent conductive layer, a light-absorption layer and an insulating layer as recited in Claim 26. In the event that the Examiner maintains this rejection, Applicants respectfully request that the Examiner specifically identify the portion of Pei that discloses a first electrode comprising a transparent conductive layer, a light-absorption layer and an insulating layer as recited in Claim 26.

Claim 27

The Examiner cites paragraph 0187 of Pei, contending that it discloses a movable second electrode that is a light-reflection electrode. Applicants disagree. As noted above, Pei paragraph 0187 merely indicates that a reflective surface may be bonded to a bending beam actuator. Pei does not disclose a movable light-reflection electrode as recited in Claim 27. In the event that the Examiner maintains this rejection, Applicants respectfully request that the Examiner specifically identify the portion of Pei that discloses a movable light-reflection electrode.

Claim 28

The Examiner cites paragraph 0195 of Pei, contending that it discloses a hydrophobic layer preventing the first electrode from adsorbing water molecules. The Applicant disagrees. Pei paragraph 0195 relates to the pre-strained polymers, not to a hydrophobic layer on a cavity-side surface of the first electrode. Furthermore, Pei paragraph 0195 does not expressly or inherently refer to a layer that would prevent an electrode from adsorbing water molecules. Pei

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paragraph 0195 refers to a non-sticking plastic substrate, but this substrate is merely involved in the manufacturing process of the polymers, and is not present in the resulting device. Thus, Pei does not anticipate Claim 28.

Claim Rejections under 35 U.S.C. § 103

Claims 22, 24 and 25 have been rejected as being obvious over Pei in view of Peterson et al. (US 6,335,224). As discussed above, Pei does not disclose the combination of limitations recited in independent Claim 20, from which Claims 22, 24 and 25 depend. The combination of Pei with Peterson asserted by the Examiner does not cure these deficiencies. Neither reference teaches nor suggests an interferometric modulation pixel comprising two supports between the first electrode and the second electrode to form a cavity between the first and the second electrodes and a hydrophobic layer on a cavity-side surface of a first electrode. Therefore, the Applicant respectfully requests reconsideration and withdrawal of these rejections.

Applicants respectfully submit that this application is in condition for allowance, early notification of which would be appreciated. If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly at the telephone number provided below.

Respectfully submitted,

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